BOOK REVIEW. **Malaysia Plant Red List, Peninsular Malaysian Dipterocarpaceae.** (FRIM Research Pamphlet No. 129) ***L.S.L. Chua, M. Suhaida, M. Hamidah & L.G. Saw.*** 2010.
Kepong: Forest Research Institute Malaysia. 25.5 cm × 18.5 cm, card cover. 210 p. ISBN 978–967–5221–34–7. Price RM 20.00 / USD 15.00.

In view of the worldwide threat to our environment through habitat degradation and land use change, conservation efforts with the aim to protect the world's biodiversity have increased dramatically over the last few decades. They are generally based on the understanding that any measures to ensure successful conservation and sustainable utilisation of the biological diversity require a detailed understanding of the plant and animal species to be protected, including their distribution, ecology and conservation status. In Malaysia, one of the aims of the National Strategy for Plant Conservation is to obtain preliminary assessments of the conservation status of all plant species of the country, and as a consequence a project on the conservation monitoring of rare and threatened plants was initiated. Families Dipterocarpaceae, Palmae (= Arecaceae) and Begoniaceae have been identified for the first phase of this project. Being an economically important 'keystone family', the dipterocarp family is treated in the present book which is the first in a series of Red Data assessments.

Although many Malaysian tree families are included in a recent global IUCN Red List, there is currently no national Red Data List, and the present publication is intended to fill this gap for the dipterocarp family. The introductory part of this book gives background information on family Dipterocarpaceae (distribution, habitat ecology, uses), on land use changes in Malaysia and threats to dipterocarp trees. A section explains the IUCN Red List Categories and Criteria version 3.1 (2001) that have been used in the assessments. Existing conservation policies and laws are discussed, and future steps in the conservation monitoring are outlined. The scope and objectives of the conservation monitoring project which forms the basis for the present book are explained. The present Red List is intended as the first critical step towards prioritisation of national conservation measures. Several conservation recommendations are made, most importantly the need to incorporate conservation principles at the planning stage of developments, to make additions to legal and policy provisions with regard to habitat protection, to further fundamental research to increase our knowledge of threatened species, to organise educational programmes aimed at local involvement, and to increase networking efforts among stakeholders. One of the important outcomes of the conservation monitoring project is that the cooperation between the Forest Research Institute Malaysia (FRIM) and various stakeholders has resulted in an increased awareness of rare and threatened species and the need to conserve them. Rescue operations are encouraged which, apart from rescuing threatened populations, would also increase *ex situ* collections of Dipterocarpaceae.

Three informative tables are given in the introductory part, showing the number of taxa arranged after genera in each of the IUCN categories, listing all of the threatened taxa, and breaking down the number of threatened taxa after the Malaysian states. Ninety-two taxa occurring in Peninsular Malaysia are considered threatened, which is roughly 56% of the total number, while one (*Shorea kuantanensis*) is considered extinct. The Malaysian state with the largest number of threatened taxa is Pahang with 59, followed by Johor (54) and Perak (53). Compared with previous assessments, the conservation status of six taxa has been upgraded to a higher threatened category, and

in 57 taxa downgraded to a lower threatened category. Fifty-eight taxa which were assessed as threatened before were here downgraded to not threatened. Another result of the present conservation monitoring project is that one new species was discovered (*Vatica yeechongii*) and two new distribution records were made (*Dipterocarpus tempehes, Dryobalanops beccarii*). Nine species which were previously thought to be extinct were rediscovered.

In the main section of the book, the conservation status of all except one of the 165 taxa of Dipterocarpaceae occurring in Peninsular Malaysia is assessed according to the IUCN Red List Categories DD (= Data Deficient), EX (= Extinct), CR (= Critically Endangered), EN (= Endangered), VU (= Vulnerable), NT (= Near Threatened) and LC (= Least Concern). In the three threatened categories CR, EN and VU the assessment criteria are indicated, e.g., VU B2b(iii)+c(ii). The assessments are based on information obtained from specimens found in Malaysian as well as in European herbaria and on fieldwork during the present conservation monitoring project. In addition, further contributions have been made through data obtained in decades of forest management. Taxa that occur in both Peninsular Malaysia and East Malaysia (= Sabah + Sarawak) are assessed separately for each region, and the higher category was chosen for the national conservation status. In each of the 164 assessed taxa the vernacular names, distribution (both worldwide and within Malaysia) and habitat are also given. Various additional conservation notes are also provided (mostly referring to the presence of the taxon in protected areas), and previous assessments are cited. Each one of the assessments is accompanied by distribution maps of Peninsular Malaysia and East Malaysia (if occurring here also). Grey shading in these maps indicates, a) in case of Peninsular Malaysia the extent of the forest cover of the region, and b) in case of East Malaysia the Extent of Occurrence of the dipterocarp taxon (using grey shading for different attributes in the maps seems somewhat confusing to me, but this is perhaps just a matter of personal preference; in any case it is the only negative point noted in this review). Attached to these maps are several selected localities, the Extent of Occurrence of the taxon, the Area of Occupancy of the taxon and, for Peninsular Malaysia, also the extent of the forest cover within the Extent of Occurrence. In many of the distribution maps also *ex situ* collections are marked. For a number of taxa, line drawings of various plant features (leaves, flowers, fruits) are provided in this assessment section.

The text is followed by a large section with high-quality colour illustrations, comprising well over 150 photos grouped in 39 plates. A total of 68 taxa are illustrated. Most of the photos show the bark, leaves and young or mature fruits, and in some cases also the entire tree, the flowers or seedlings are shown. An index to scientific names and another to vernacular names conclude the book.

The book is the first complete assessment of the conservation status of Peninsular Malaysian dipterocarps, and, with its clear and well-arranged text and the many informative distribution maps and plant illustrations, should be recommended to everyone with an interest in tropical trees.

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